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No. III.

PREVENTING THE WATERING OF SILKS.

The sum of FIVE GUINEAS was this session given to Mr. PETER CARON, of Church-street, Bethnal-green, for his method of PREVENTING THE WATERING OF SILKS WITHOUT THE USE OF A KNEE-ROLL.

THERE are two imperfections which silks, especially plain ones, are liable to acquire in the loom. One, called cockling, is merely an unevenness of the surface, and arises usually from one longitudinal edge or selvage of the piece being more stretched than the other, in consequence of its not being wrapped evenly round the roll or cylinder of the loom. The other imperfection, called watering, is a wavy or streaky appearance, produced by a play of light on the surface of the silk, though that surface may be quite smooth. The cause of this wavy appearance is not completely understood, but appears in a great measure to depend on unequal pressure being given to the piece while on the roll. It is well known that the highest polish and gloss is given to silk in the hank by twisting it hard, and at the same time giving it a kind of oscillating movement, so that each individual thread may be rubbed repeatedly on those with which it is in contact, whereby they mutually polish each other. Now, a piece of silk in the process of manufacture may be conceived to be placed in circumstances considerably favourable to the production of this partial polish, if, when rolled tight and rather unevenly on

the roll, it is subject to the vibration occasioned by the stroke of the lay upon the weft, which takes place after every throw of the shuttle.

The contrivance which used to be resorted to in order to prevent the watering of silks was by means of a knee-roll. The five or six yards which constitute an average day's work being first rolled on the large or breast-roller during the weaving, were every evening transferred to a smaller roll, called, from its position, a knee-roll. In doing this great care was required to lay each fold precisely upon the preceding one, a manipulation that occupied about half an hour; and the silk, by frequent handling, was apt to become soft and less saleable.

Of late years, attempts, more or less successful, have been made to avoid the use of the knee-roll, by inserting a sheet of thin glazed pasteboard at certain intervals between the folds of silk on the breast-roll, which, from its elasticity, yields to the vibration of the loom without communicating any motion to the silk, while its own smooth surface allows it to move a little on the surface of the silk without any injurious friction. The most successful application of this contrivance has been made by the candidate, Mr. Peter Caron, which although, perhaps, in part to be attributed to his own individual dexterity, (for by the testimony of the foreman of Mr. Leveque, for whom he works, he appears to be a remarkably careful, skilful weaver,) has been considered by the Society worthy of being made public for the benefit of others in the same trade, both workmen and masters.

The process is the following :

After a *porry*, (a quantity of five or six yards), has been wove and rolled on the breast-roll in the usual way during

the weaving, it is to be unrolled, and carefully rolled again as evenly as possible, a sheet of pasteboard or pressers' paper being put into the last turn. When a second porry has been finished, it is to be again rolled as above described, the sheet of pasteboard inserted in the last fold of the former porry being first removed; but at the end of every second porry, or twelve yards of work, the pasteboard which has been inserted is to remain till the piece is finished, especial care being taken that the pasteboard lies as close on the roll as the work itself does. Mr. Caron has practised this method for three years, and during that time has not had a piece in the slightest degree watered. The kinds of work to which it has been applied have been gros de Naples, Florentines, and double-twilled sarsenets.

Plain sarsenets are very liable to cockle, or run into ridges, when the warp is uneven. This may be prevented by inserting a glazed pasteboard in every twenty-four yards of work, and leaving it there till the piece is finished.